

WHAT IS CLAIMED IS:

1. A narrow band and spread spectrum communication system for a vehicle, comprising:
 - a signal processing circuit; and
 - an antenna system connected to the signal processing circuit, the antenna system operable to receive a narrow band signal and an input spread spectrum signal,where the signal processing circuit is operable to generate a spread spectrum-like signal in response to the narrow band signal; and
 - where the signal processing circuit is operable to generate an output communication signal in response to at least one of the spread spectrum-like signal and the input spread spectrum signal.
2. The communication system according to Claim 1, where the antenna system comprises a multimode antenna.
3. The communication system according to Claim 1, where the antenna system comprises a first antenna and a second antenna, the first antenna responsive to the narrow band signal, the second antenna responsive to the input spread spectrum signal.
4. The communication system according to Claim 1, where the narrow band signal comprises at least one of an amplitude modulation (AM) signal and a frequency modulation (FM) signal.
5. The communication system according to Claim 4,
 - where the AM signal comprises a frequency within the range of about 550 KHz through about 1610 KHz, and
 - where the FM signal comprises a frequency within the range of about 88 MHz through about 108 MHz.
6. The communication system according to Claim 1, where the input spread spectrum signal comprises a code division multiple access (CDMA) signal.

10040854-12201

7. The communication system according to Claim 6, where the input spread spectrum signal comprises a frequency of about 800 MHz.

8. The communication system according to Claim 6, where the spread spectrum signal comprises a frequency of about 1900 MHz.

9. The communication system according to Claim 1, where the output communication signal comprises a first output audio signal and a second output audio signal, the first output audio signal responsive to the spread spectrum signal, the second output audio signal responsive to the narrow band signal.

10. The communication system according to Claim 9, where the second output audio signal is deactivated in response to the first output audio signal.

11. The communication system according to Claim 1, where the signal processing circuit comprises:

an input signal processor connected to an input device and the antenna system, the input signal processor operable to generate an output spread spectrum signal in response to an input communication signal from the input device;

an output signal processor connected to an output device and the antenna system, the output signal processor operable to generate the output communication signal in response to the input spread spectrum signal; and

a narrow band receiver connected to the antenna system and the input signal processor, the narrow band receiver operable to provide the narrow band signal from the antenna system to the input signal processor,

where the signal processor is operable to generate a spread spectrum-like signal in response to the narrow band signal; and

where the output signal processor is operable to generate the output communication signal in response to the spread spectrum-like signal.

12. The communication system according to Claim 1, where the output communication signal comprises at least one of an audio signal and a data signal.

10040354-122301

13. A narrow band and spread spectrum communication system for a vehicle, comprising:

a narrow band receiver;

an input signal processor connected to the narrow band receiver, the input signal processor operable to generate a spread spectrum-like signal in response to a narrow band signal from the narrow band receiver, the input signal processor operable to generate an output spread signal in response to an input communication signal; and

an output signal processor connected to the input signal processor, the output signal processor operable to generate an output communication signal in response to the spread spectrum-like signal, the output signal processor operable to generate the output communication signal in response to an input spread spectrum signal.

14. The communication system according to Claim 13, where the input signal processor comprises a spreader connected to the narrow band receiver and the output signal processor, the spreader to spread the narrow band signal in response to a pseudonoise (PN) sequence provided by a PN generator.

15. The communication system according to Claim 13, where the output signal processor comprises a despreader connected to the input signal processor, the despreader to despread the spread spectrum-like signal in response to a pseudonoise (PN) sequence provided by a PN generator.

16. The communication system according to Claim 15, where the despreader comprises a first despreader and a second despreader, the first despreader responsive to the input spread spectrum signal, the second despreader responsive to the spread spectrum-like signal.

17. The communication system according to Claim 13, further comprising:
an input device connected to the input signal processor; and
an output device connected to the output signal processor.

18. The communication system according to Claim 17, where the input device and the output device comprise a portable device.

19. The communication system according to Claim 13, further comprising a first speaker and a second speaker connected to the output signal processor, the first speaker responsive to the narrow band signal, the second speaker responsive to the input spread spectrum signal.

20. The communication system according to Claim 13, where the narrow band signal comprises at least one of an amplitude modulation (AM) signal and a frequency modulation (FM) signal.

21. The communication system according to Claim 20, where the AM signal comprises a frequency within the range of about 50 KHz through about 1610 KHz, and where the FM signal comprises a frequency with the range of 88 MHz through about 108 MHz.

22. The communication system according to Claim 13, where the input and output spread spectrum signals comprise code division multiple access (CDMA) signals.

23. The communication system according to Claim 22, where the CDMA signals have a frequency of about 800 MHz.

24. The communication system according to Claim 22, where the CDMA signals have a frequency of about 1900 MHz.

25. The communication system according to Claim 13, where the output communication signal comprises at least one of an audio signal and a data signal.

26. A method for integrating narrow band and spread spectrum signals in a vehicle communication system, comprising:
receiving a narrowband signal;
generating a spread spectrum-like signal in response to the narrow band signal; and

10040354 122801

generating an output communication signal in response to the spread spectrum-like signal.

27. The method according to Claim 26, where the output communication signal comprises a first output audio signal and a second output audio signal, the first output audio signal responsive to the spread spectrum signal, the second output audio signal responsive to the narrow band signal.

28. The method according to Claim 26, further comprising:
receiving an input spread spectrum signal; and
generating the output communication signal in response to the input spread spectrum signal.

29. The method according to Claim 26, further comprising deactivating generation of the output communication signal in response to the spread spectrum-signal.

30. The method according to Claim 26, further comprising generating an output spread spectrum signal in response to an input communication signal.

10040854.122901